

ABSTRACT OF THE DISCLOSURE

The disclosure describes a method to fabricate nanostructures by integrating the steps of attriting precursor nanometer-sized particulate materials, desorbing the exposed surfaces of the attrited nanoparticulates, adsorbing a surfactant on at least 50% of the desorbed surfaces and dispersing the surfactant-coated nanoparticulates in an organic matrix to form a homogeneous thermoplastic compound from which green nanostructures are shaped, dewaxed and sintered. The method substantially overcomes the problems of aggregation, contamination and pyrophoricity inherent in nanoparticulates.